AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning on page 20, line 7, with the following rewritten paragraph:

The structural thermal framing and panel system for assembling finished or unfinished walls with multiple combination for pour and non poured wall 29, shown in ~~FIG. 1, FIG. 2, FIG. 3, FIG. 4, FIG. 5, FIG. 6, FIG. 7, FIG. 8, FIG. 9, FIG. 10, FIG. 11, FIG. 12, FIG. 13, FIG. 14, FIG. 15, FIG. 16, FIG. 17, FIG. 18, FIG. 19, FIG. 20, FIG. 21, FIG. 22, FIG. 23, FIG. 24, FIG. 25, FIG. 26, and FIG. 27~~ FIGS. 1-27 comprises at least one framing stud assembly 30, FIG. 3 and FIG. 4, having one first end 31, which is more generally referred to as a stud element of the framing stud assembly, FIG. 3 and FIG. 4, having sufficient thickness, width and length, having one web 33, FIG. 3 and FIG. 4, having sufficient thickness, width and length, one flange 35, FIG. 4, having sufficient thickness, width and length, at least one interlock tab 38, FIG. 4, having sufficient thickness, width and length, one top tab 39, FIG. 3, having sufficient thickness, width and length, one bottom tab 41, FIG. 3, having sufficient thickness, width and length, at least one electric utility hole 44, FIG. 4, having sufficient area to accommodate electric conduit. One second end 32, which is more generally referred to as a stud element of the framing stud assembly, FIG. 3 and FIG. 4, having sufficient thickness, width and length, having one web 34, FIG. 3 and FIG. 4, having sufficient thickness, width and length, one flange 36, FIG. 4, having sufficient thickness, width and length, at least one slotted interlock receiver hole 37, FIG. 4, having sufficient area to accommodate interlock tab 38, FIG. 4, located on said first end 31, FIG. 3 and FIG. 4, one top tab 40, FIG. 3, having sufficient thickness, width and length, one bottom tab 42, FIG. 3, having sufficient thickness, width and length, at least one rebar holder 43,

FIG. 4, having sufficient thickness, width and length and having sufficient area to accommodate required horizontal rebar, at least one electric utility hole 45, FIG. 4, having sufficient area to accommodate electric conduit, FIG. 1, shows a structural thermal framing and panel system with multiple panel combinations for nonpoured wall comprising of at least one said framing stud assembly 30, FIG. 3, at least one straight insulated panel 46, FIG. 5 and FIG. 6, having sufficient thickness, width and length, at least one outside 90 degree comer insulated panel 51, FIG. 7 and FIG. 8, having sufficient thickness, width and length and/or at least one inside 90 degree corner insulated panel 52, FIG. 9 and FIG. 10, having sufficient thickness, width and length and/or having at least one inside 45 degree corner insulated panel 53, FIG. 11 and FIG. 12, having sufficient thickness, width and length, and/or having at least one outside 45 degree corner insulated panel 54, FIG. 13 and FIG. 14, having sufficient thickness, width and length all said panels having one top groove 47, FIG. 5, FIG. 6, FIG. 7, FIG. 8, FIG. 9, FIG. 10, FIG. 11, FIG. 12, FIG. 13 and FIG. 14, having sufficient area to accommodate ⅂ shaped header 55, FIG. 18, having sufficient thickness, width and length and ⌐ shaped header 56, FIG. 19, having sufficient thickness, width and length, at least one L shaped slotted connector angle 57, FIG. 17, having sufficient thickness, width and length and having multiple slotted received hole 58, FIG. 17, to accommodate top tab 39, FIG. 3, and top tab 40, FIG. 3, said panels having groove 48 having sufficient area to accommodate electric utility conduit, having slot 49 having sufficient area to accommodate said framing stud flange, having two inset area 50 having sufficient area to accommodate same framing stud flange. Said groove 48, slot 49, inset 50 are shown in FIG. 5, FIG. 6, FIG. 7, FIG. 8, FIG. 9, FIG. 10, FIG. 11, FIG. 12, FIG. 13 and FIG. 14.

Please add the following new paragraphs after the paragraph ending on line 4 of page 24:

--A structural thermal framing and panel system 29 is provided for assembling finished or unfinished walls with multiple panel combinations for nonpoured walls. The structural thermal framing and panel system 29 includes at least one framing stud assembly 30 and at least one straight panel 46. The structural thermal framing and panel system 29 can also include at least one outside comer panel 62 and/or at least one inside corner panel 63. Each corner panel can be insulated and can have a bend of about 90 degrees or about 45 degrees. The structural thermal framing and panel system can also include at least one top header 55, 56, and at least one L shaped slotted connector angle 57 and at least one slotted received hole for the top tab 39/40. The top header can be Z shaped or reverse Z shaped.

The framing stud assembly 30 can include a first end 31 with a web 33, a flange 35, at least one interlock tab 38, a top tab 39, a bottom tab 41, and at least one electric utility hole 44 having sufficient area to accommodate electric wires. The framing stud assembly 30 can also include a second end 34 with a web 34, a flange 36, at least one slotted interlock receiver hole 37 having sufficient area to accommodate the interlock tab 38 located on the first end and allowing the interlock tab 38 to firmly hold the first end 31 to the second end 32, a bottom tab 42, at least one electric utility hole 45 having sufficient area to accommodate electric wires, and at least one rebar holder 43 for holding at least one horizontal rebar 65.

The straight panel 46 can include a top header 55/56, a top groove 47 having sufficient area to accommodate the top header 55/56, at least one L shaped slotted connector angle 57 having at least one slotted receiver hole 58 to accommodate the top tab 39/40 located on the framing stud top surface, and inset area locations having sufficient area to accommodate the

flange located on the framing stud assembly. The inset area and the slot are used to locate the framing stud assembly 30 on the straight panel 46.

The corner panel can include a top header 55/56, a top groove 47 having sufficient area to accommodate the top header 55/56, at least one L shaped slotted connector angle 57 having at least one slotted receiver hole 58 to accommodate the top tab 39/40 located on the framing stud top surface, inset area locations having sufficient area to accommodate the flange located on the framing stud assembly, and slot locations for the flange on the framing stud assembly 30. The inset area and the slot are used to locate the framing stud assembly 30 on insulated panels 46.

The straight insulated panel 46 can also include at least one corner thin panel having a bend of about 90 degrees and configured in a long bend, short bend or a combination of both. The corner thin panel can also have a bend of about 45 degrees. Concrete filler can be placed between the panels.

The panels 46 can also include a slot 48 in locations for the flange on the framing stud assembly 30. The L shaped slotted connector angle 57 includes at least one slotted receiver hole 58 to accommodate the top tab located on the framing stud top surface. Inset area locations have sufficient area to accommodate the flange located on the framing stud assembly 30. Slot locations for the flange are provided on the framing stud assembly 30. The inset area and slot are used to locate the framing stud assembly 30 on the straight thin insulated panel 46 and the corner thin panel 62/63.

The top tab 39/40 may be bent at an angle of about 90 degrees after being received through the slotted received hole 58 in the L shaped slotted connector angle 57. Additionally, the bottom tab 66 may be bent at an angle of about 90 degrees to be used to attach the framing stud

assembly 30 to the footing 68. The framing stud assembly 30 can also include at least one interlock tab 38 located on the first end 39 and at least one interlock receiver hole 37 located on the second end 32 allowing the framing stud assembly 30 to be adjusted to various wall widths.

In various embodiments of the present invention, interior forms, exterior forms or panel forms are supported by stud frames. The forms or panel forms can be arranged to defined a space for receiving filler materials. The filler material includes concrete, sand, gravel, portland cement, or any other wall building material known to those skilled in the art. Each stud frame can include an interior form holder and an exterior form holder. The holders can include an outside flange. If the form or forms need to be held in place until the filler is poured, adhesive or fasteners are used to secure the forms to the flange. In the embodiment shown, vertical support or stud frame extend from the top to the bottom of the wall. The two piece support of each stud frame may be tied together. To reconnect the stud frame, which is in two parts, rebar 65 extends through the interior of the wall and is supported by the bend out brackets of the web.

A side view of several stud frames and forms are shown standing on a footing. The stud frames are connected to the footing 68 by fastening tabs or L channels 66. One embodiment includes two lengths of angle sheet metal or iron which are secured to the footing 68 by concrete nails or bolts. The stud frames are then connected to the anchor by metal screws. In alternative embodiments, the stud frames are secured to the anchors by welding or any other means known to those skilled in the art. In a further embodiment, no anchors are necessary because the stud frames are fastened to the footing 68 with the fastening tabs on the stud frame or they can be set in the footing 68 while the concrete of the footing 68 is still wet.

In an example of an embodiment of the present invention, a standard eight foot wall comprises two three inch thick forms and a concrete core having one of a variety of thicknesses, such as about six inches for a total wall thickness of about twelve inches. Note that forms and stud frames come in various thicknesses, widths, and heights for various applications and may also be pre-assembled into bigger sections or as complete walls prior to delivery to the job site. The stud frames are vertically positioned approximately one to four feet apart, or other effective spacing. The stud halves of the stud frame are approximately two inches wide and the outside flanges are spaced about six to twenty about four inches apart. The connection points of the studs, for example, slotted interlock receiver hole 37 and interlock tab 38 are spaced about six to about twelve inches, one above the other. The connection points of the stud frames can be made from galvanized steel and connected by spot welding or other known methods of fastening. The stud frames can alternatively be connected by hook brackets that can hook to each other or to the rebar. The forms can be made of expanded polystyrene (EPS) having variable densities. The form types are cut, extruded, or molded from standard EPS or other types of expanded light weight materials which have preferably been treated with flame and smoke retardants and treated to resist insects. Specifically, sheets of expanded polystyrene can be obtained, for example, from AFM Corporation, P.O. Box 246, Excelsior, MN 55331, or one of its affiliates. Compared to a twelve inch thick solid concrete wall, which has an R rating between six and eight, the above-described wall's have an effective R rating of approximately twenty-five to fifty depending on panel type and configuration used.

In a further embodiment, the stud frame includes one piece of sheet metal that is cut, formed, and connected into a one piece structural element capable of supporting several thousand

pounds. However, only a single connection is placed at the top of each stud frame to tie the stud halves together. Thus, in this embodiment, the supports are secured at the bottom by the anchors and at the top by a connection.

In a retaining wall application of the present invention, each stud frame comprises a single support. The stud half also includes one set of holders for holding a single set of forms. A trench is cut in the ground and the forms are assembled so the forms are opposite a wall of earth wherein the space for fillers is defined between. Struts extend from the stud half of each stud frame into the wall of earth to steady the studs.

In a process for assembling the wall forms, the footing of the foundation is first poured. Once the footing has solidified, anchors are secured to the footings 68. Next, a stud frame is placed upright on the footing 68 and secured to the anchors. In some panels an exterior form can then be connected to the first stud frame. Similarly, an interior form can also be connected to the first stud frame at a position opposite to the exterior form. A space for receiving filler is thereby defined between the forms. A second stud frame is then placed upright on the footing 68 and secured to the anchors. The second stud frame is then connected to both the interior and exterior forms. Additional stud frames and forms are then added until the entire wall forms are arranged in place. Other panels are connected in a similar fashion. The tops of the stud frames are then connected to each other to provide more stability. Finally, rebar 65 is inserted between the interior and exterior form and placed through the rebar positioners of the struts.

Once the forms are properly in place, the wall is formed by pouring filler into the forms. A process for this procedure is accomplished by pouring the filler into the bottom portion of the forms. The filler in the bottom portion of the forms is allowed to partially set. Once the filler

has begun to harden, additional filler is poured on top of bottom portion of filler. This additional layer of filler is also allowed to partially set. The pouring and setting is continued until the desired wall height is achieved. In some panel type configurations, where additional exterior panel support is added, filler may be poured in continuous lifts.

In another embodiment of the invention, a window is cut in the forms. In this embodiment, a hole is cut in the interior forms and form holders which pass through the window area. Similarly, a hole is cut in the exterior forms and form holders of the braces which pass through the window area. The stud halves and connections are also removed from the window area. In order to prevent filler from flowing out of the holes, a tube is placed in the window to form the circumference of the space. The window, of course, may be practically any shape desired. In one embodiment, the tube includes sheet metal and has flanges which extend beyond and wrap around the outside of both the interior and exterior forms. In another embodiment, window and door areas are closed off by sliding in filler pieces around the areas that will not be filled. These pieces slide in-between each panel and lock in place due to a keyed grooving process incorporated in the panel form. This allows the user to have the ability to close off various areas of the panel simply by sliding in the filler pieces. Also, this allows one type of panel to be poured to various wall thicknesses. Post and beam combinations or solid unfilled walls can be used with wood or steel type header elements instead of concrete.

In another embodiment of the invention, the filler is poured into the defined spaces in the forms to create the wall. Once the filler has been poured and set, the forms are not removed. Rather, the forms remain a permanent part of the wall to improve the thermal characteristics and structural integrity of the wall.

In further embodiments, channels are cut into either the interior or exterior of the form for installing electrical or plumbing conduits. A channel is cut into a number of exterior forms and spans across several stud frames. Any means may be used to cut the channel into the forms.

In another embodiment of the invention, a wallboard is attached to the interior or exterior of the formed wall. In this embodiment, the braces comprise wallboard hangers which extend between two adjacent forms. The wallboard hanger includes any suitable material known to those skilled in the art, such as metal, plastic, wood, etc. Further in alternative embodiments, the wallboard hanger does not include a single strip that runs the length of the brace, rather it includes several smaller hangers such that each hanger extends only over a portion of the brace. These smaller hangers are arranged at various locations along the brace between two adjacent forms. In other embodiments, the hangers are embedded in the forms or protruded through holes in the forms. A wallboard can be positioned against the wallboard hangers. Fasteners secure the wallboard to the wallboard hangers. Fasteners include screws, nails, spot welds, rivets, glue, etc. Any type of wallboard may be secured to the wallboard hangers such as sheet rock, wood panels, vinyl siding, metal siding, brick or stone facades, etc. Alternatively, a support mesh is attached to the forms to serve as a support for a stucco surface. In particular, Elastomeric Synthetic Plaster (Stucco) "Perma-Flex" is applied directly to the wall as recommended by El Rey Stucco Company of 4100 Broadway SE, Albuquerque, New Mexico, 87105.

In one embodiment, the member, which serves as the wallboard hanger, serves a dual function: (1) it is a hanger to which fasteners are attached to secure wallboard to the wall; and (2) it is the outer flange which holds the forms.

The width of the supports depends on the weight of the wallboard and the size of the conduits required for the particular application. In embodiments where no conduits are to be embedded in channels of the forms, the supports may be thicker than the forms so they project into the space for the filler. Also, in embodiments requiring heavy wallboard, the supports should be thicker or made of a material having sufficient strength to sustain the wallboard.

Another embodiment of the invention provides forms that are a pre-finished substrate. A desired substrate suitable for the climate where as any or all substrates in use may be applied to forms before delivery. Specifically, a fiber reinforced acrylic modified cement type product can be used on the panels or forms.--

AMENDMENTS TO THE DRAWINGS

The attached replacement drawing sheets make changes to FIGS. 1 and 2 and replace the original sheets of FIGS. 1 and 2.

Attachment: Marked-up Copy of FIGS. 1 and 2, and Replacement Sheets